

WETLAND ENHANCEMENT DESIGN AND CHECK DATA REQUIREMENTS

The following items must be addressed in the design folder for the wetland project.

The following pages shall be included:

- (1) Table of Contents
- (2) Design Data Summary
- (3) Soils and Foundation Data
- (4) Engineering Drawings
- (5) Construction Specifications
- (6) Operation and Maintenance Plan
- (7) Erosion and Sediment Control Plan
- (8) Construction Check Data

Listed below are specific items that are required in the design:

Table of Contents

This organizes the design folder.

Design Data Summary

Important data is recorded and is consistent with the standard and specification. This includes:

- Survey data
- Soils investigation
- Hydrology and hydraulics
- Dimensions and material requirements for structures.
- Cost estimate
- Outlet stability
- Vegetation requirements

Soils and Foundation Data

Written soils description and map for project location and with site specific comments.

Soils test pit information if determined necessary.

Document need for rock excavation, drainage, isolation from open foundation rock, and depth limitations based on soils investigation.

Engineering Drawings

GENERAL

On each drawing sheet, the title block shall show the operator's name, type of operation, county and the persons involved in designing, and checking the wetland design.

All wetland designs require approval by a registered Professional Engineer or an individual with NRCS job approval authority for the type, dimensions and capacity of the wetland. If a DEP permit is required, additional details may be needed.

Listed are items that should be included:

PLAN VIEW SHEET(S)

North arrow
 Utilities/roads
 Bench mark(s)
 Spot elevations or contours
 Apparent property lines (if appropriate)
 Water courses
 Structure locations
 Scale
 Legend
 Access
 Centerlines
 X-section locations
 Test pit or auger hole locations (if done)
 Construction limits
 Borrow area
 Spoil area
 PA One-Call statement

CROSS-SECTION SHEET(S)

Scale(s)

Test pit or auger hole profile(s) if done.

Original ground and proposed grade

Embankment dimensions and slopes

Spillway(s)

Spillway (open and pipe) profiles

Reference to detail drawings

Construction Specifications

Enclose the applicable specification(s), e.g. 659, 362, 342.

Complete all site specific items of work in Section 9 (Additional Conditions).

Operation and Maintenance Plan

A site specific plan is written and indicates clearly when the wetland should be inspected, appurtenances operated, and maintenance performed.

Are safety features in place; e.g. warning signs, fencing?

Erosion and Sediment Control Plan

See DEP's Erosion and Sediment Pollution Control Program Manual and consult with the local Soil Conservation District.

Construction Check Data

QUALITY ASSURANCE PLAN

A site-specific plan that addresses, but is not limited to:

What specific items need inspection and when?

Who will do the actual inspection?

Is any testing equipment required for the inspection?

ONSITE VISITS

The QAP must include, at a minimum, as applicable to the specific job, onsite visits at the:

1. Start of construction
2. Completion of foundation excavation, to observe and record the foundation conditions encountered and compare with the conditions assumed in the design.
3. Installation of earthfill material.
4. Installation of water control structure, pipe connections and backfill.
5. Completion of final grading.
6. Start of seeding.

DOCUMENTATION

Project documentation shall include:

1. A full set of as-built drawings, with construction certification signatures. Any modifications should be recorded in red.
2. Checked survey notes.
3. Material certifications, photographs, etc. as applicable.
4. Contractors' certifications of conformance.